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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/542,321	07/13/2005	Masayoshi Mori	101173-00024	8916

4372 7590 01/24/2006

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EXAMINER

NGUYEN, HOANG M

ART UNIT	PAPER NUMBER
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3748

DATE MAILED: 01/24/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/542,321	Applicant(s) MORI, MASAYOSHI	
	Examiner Hoang M. Nguyen	Art Unit 3748	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-7 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>07/13/05</u> | 6) <input type="checkbox"/> Other: ____ |

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 1 is rejected under 35 U.S.C. § 103(a) as being unpatentable over WO 00/29246 (Hesse et al) in view of U.S. 6543229 (Johansson). Hesse discloses a power plant comprising an internal combustion engine 10, an electric motor 14, a battery 22, auxiliary machines 16, 18, a drive mechanism 12. Hesse et al does not disclose the drive mechanism is a Stirling engine using waste heat from the internal combustion engine. Johansson is relied upon to disclose a power plant comprising a Stirling engine 14 using waste heat from the internal combustion engine 12. It would have been obvious at the time the invention was made to a person having ordinary skill in the art to use Stirling engine using waste heat of the ICE in Hesse et al as taught by Johansson for the purpose of utilizing the waste heat to reduce cost and reserve power of the ICE.

Claims 2-3 are rejected under 35 U.S.C. § 103(a) as being unpatentable over WO 00/29246 (Hesse et al) in view of U.S. 6543229 (Johansson) and JP 2000-310158 (Sakai). Hesse as modified discloses all the claimed subject matter as set forth above in the rejection of claim 1, but does not disclose the engine speed control for the Stirling engine. Sakai is relied upon to disclose a power plant comprising a Stirling engine 3 having a controller 5 for controlling the Stirling engine in response to an engine speed. It would have been obvious at the time the invention was made to a person having

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ordinary skill in the art to use engine speed control in the Stirling engine in Hesse et al as taught by Sakai for the purpose of generating an appropriate amount of energy in response to the engine speed.

Claims 4-7 are rejected under 35 U.S.C. § 103(a) as being unpatentable over WO 00/29246 (Hesse et al) in view of U.S. 6543229 (Johansson) and JP 2000-310158 (Sakai) and JP 2001-298803 (Kawabata). Hesse as modified discloses all the claimed subject matter as set forth above in the rejection of claim 2, but does not disclose the clutches for the auxiliary machines. Kawabata is relied upon to disclose a power plant comprising a pair of clutches 86, 87 to drive the auxiliary machines if needed. It would have been obvious at the time the invention was made to a person having ordinary skill in the art to use clutches in Hesse et al as taught by Kawabata for the purpose of controlling the driving options for those auxiliary machines.

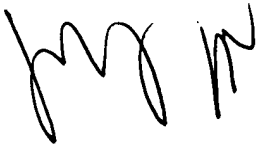
The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Masberg et al and Kubo et al disclose systems using ICE in combination with Stirling engine.

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Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Examiner Nguyen whose telephone number is (571) 272-4861. The examiner can normally be reached on Tuesday--Friday from 12:30 AM to 10:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas Denion, can be reached on (571)-272-4859. The fax phone number for the Examiner is (703) 872-9306 for regular communication, and (703) 872-9303 for after final communication.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (571) 272-3700.



1/19/06

HOANG NGUYEN
PRIMARY EXAMINER
ART UNIT 3748

Hoang Minh Nguyen
1/19/2006